DOCUMENT RESUME

ED 405 053 JC 970 178

AUTHOR Pezzoli, Jean A.
TITLE Needs Assessment for Education and Training in Welding on Maui.
INSTITUTION Hawaii Univ., Kahului. Maui Community Coll.
PUB DATE 96
NOTE 20p.
PUB TYPE Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Planning; Community Colleges; *Educational Demand; *Employer Attitudes; *Employment Projections; Inservice Education; *Job Training; Two Year Colleges; *Wages; *Welding
IDENTIFIERS University of Hawaii Maui Community College

ABSTRACT

In fall 1996, Hawaii's Maui Community College undertook a study to determine the demand for welders and welding education over the next 5 years and to estimate the characteristics of such training in terms of time of offering and courses needed. Questionnaires were mailed to a sample of 282 welding and related businesses in Maui, requesting information on needs for in-house training, the number of expected new hires, and wages paid. Study findings, based on responses received from 19% (n=54) of the businesses, included the following: (1) respondents expected to hire a collective total of 44 welders within the next 5 years, a relatively small demand compared to the college's capacity to train welders; (2) all respondents reported a starting wage of at least $8 per hour, while 17 businesses reported $15 or more, and 6 indicated that they paid $25 or more; (3) overall, respondents reported that 701 employees would benefit from taking welding courses, while the subject area with the strongest demand was the use of hand and power tools; and (4) only 7 firms indicated that they had employees who had received in-service training in the past year. Responses to open-ended questions are included. Appendixes provide a list of individuals who developed the questionnaire, the cover letter and survey instrument, a list businesses surveyed, and a table of respondents by business sector. (HAA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 405 053

Needs Assessment for Education and Training in Welding on Maui

Jean A. Pezzoli

Maui Community College

JC 970 178

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. A. Pezzoli

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

NEEDS ASSESSMENT FOR EDUCATION AND TRAINING IN WELDING ON MAUI

Maui Community College
Fall 1996

TABLE OF CONTENTS

Section I

- Purpose
- Methodology
- Results
- Synopsis

Section II

- Responder Comments

Section III

- Appendix A: Survery Developers
- Appendix B: Cover Letter
- Appendix C: Questionnare
- Appendix D: Mailing List
- Appendix E: Respondents by Business Sector

NEEDS ASSESSMENT FOR EDUCATION AND TRAINING IN WELDING ON MAUI

Maui Community College
Fall 1996

PURPOSE

The purpose of this survey was to ascertain the potential employment demand for pre-service and in-service training in welding over the next five years from related businesses on Maui, and to estimate the character of such training in terms of time of offering and courses needed.

METHODOLOGY

In conjunction with the Welding Advisory Committee, Program Coordinator, Division Chair, and the Assistant Dean of Instruction, under the auspices of the Dean of Instruction in the Fall 1996 semester (Appendix A), a cover letter (Appendix B) and questionnaire (Appendix C) were developed and field tested.

A mailing list was extracted from the yellow pages of the 1996 Maui telephone directory. The list (see Appendix D) cut across a broad spectrum of business, including not only welding firms, but also those in trucking, agriculture, autobody, electrical, plumbing, mechanics, and hotels. The sampling strategy was to poll the full population of potential Maui businesses which might hire new welding-skilled labor in the next five years, in order to gain a complete picture of the potential community demand from all relevant employment sectors. The list of businesses from the phone book was supplemented with the names of union representatives from relevant construction trades, generating a mailing list of 282 unduplicated businesses potentially utilizing employees with welding skills

On September 16, 1996, the 282 questionnaires were bulk mailed along with the cover letter and a postage paid return envelop.

The number of respondents was 54, for a return rate of 19 percent (see Appendix E). (Note: All 282 respondents would not be expected to reply because the inclusive sampling strategy, by its nature, included many for whom the survey does not apply.)

RESULTS

A. Employment Demand

The survey item dealing with potential employment demand from the community for persons with welding skill is Question #5: In the next five years, how many staff with Welding skills do you expect to hire? Results to this item are displayed in Table Q-5A and discussed below.

Table Q5-A
Expected Employment Demand for Welders

Sector	Exp'd Hires	Expansion	Replacement	Firms Hiring	Firms Resp'g
Welding	10	7	3	2	5
Misc. Weld	8	2	6	2	3
ABRP	6	2	4	2	2
Trucking	10	7	3	3	5
Electrical	2	2	-	2	14
Plumbing	-	-	-	-	2
Mechanics	1	-	1	1	5
Hotel	5	-	5	4	10
Ag	-	-	-	-	4
Special	2	2	-	1	4
Total	**44**	**22**	**22**	**17**	**54**

Number of Hires. Applicants with welding skill are needed in the near future but the demand is not large, according to the survey. Respondents expect to hire a collective total of 44 welders within the next five years.

A five-year demand for 44 new employees computes to an "annual" projected need for 8.8 new hires a year (44 divided by 5 = 8.8). This number is small in comparison to the capacity of the MCC Welding program for preparing 15 new employees per year in the Certificate of Achievement program, with a class size of 15 students.

(Note: Extrapolation that the employment need is greater than 8.8 is not appropriate in this survey, since the entire population - and not just a sample - of potential employees on Maui was surveyed.)

Replacement vs. Expansion. Expansion accounts for half (22) of the anticipated hires, and replacement for the other half (22). Despite a recent downturn of the economy, some companies are expecting expansion in this area.

Number of Hiring Companies. An interesting result comes from inspection of the concentration of affirmative responses to Item #5. Of the 54 businesses completing the questionnaire, 17 responded affirmatively that they would hire additional welding staff over the next five years: the other 37 businesses responded in the negative or left the item blank. The demand is generated from a few pockets of need.

(Note: The fact that a large proportion of respondents left the item blank is reflective of the inclusive sampling strategy.)

Type of Hiring Companies. Where are the pockets of potential employment demand and are they concentrated in the welding firms? Table Q5-A answers this question by breaking out the Item #5 responses by business type.

There are pockets of small demand for welders spread across business sectors: not only in the anticipated welding field, but also in autobody, trucking, electrical, mechanics, hotels, and miscellaneous. Areas not expecting to hire welders were plumbing and agriculture.

But, the greater demand does not come from the five welding firms responding to the survey, which anticipate hiring 10 new employees in the next 5 years. Equal demand is proposed from trucking (10). Other demand (8) is from three "miscellaneous" firms, (mostly from a fence/gate company that plans on hiring seven new employees, principally for replacement). And other pockets are in the autobody field (6) and hotels (5). All told the non-welding businesses plan to hire more persons with welding skills over the next five years (34), than do the welding companies per se (10).

This result supports a conclusion that any Welding instruction at MCC would need to serve as a support course for a broad range of vocational fields, and not focus on the employment needs of just the welding companies.

Perhaps a phrase that describes apply the employment demand for welders is provided by a respondent from the electrical field, who said any new employee "must be more than just welder." "Welding is extremely important to us—but it must be part of a complete package of skills and talents. Nevertheless we applaud your efforts to teach people this valuable skill."

B. Hourly Wage for Welding-Skilled Hires

Question #5 also asked those planning to hire Welding-skilled employees what wage they are willing to pay. This result is summarized by Table Q-5B.

Table Q-5B
Hourly Wage for New Hires with Welding Skill

Sector	Hourly Wage	Commentary
Welding	15-25, 25, 25, 25	
Misc. Weld	8	As set union wage; N/A
ABRP	8, 15	
Trucking	8, 8, 15	
Electrical	8, 15, 15, 15-25+, 25, 25, 25	Union journeyman elect – $27.05/hr. Appren is on scale depending on exp.
Plumbing	Blanks	
Mechanics	8, 8-10, 15	
Hotels	8, 8, 15, 15	
Ag	Blanks	
Special	15 (utility), 15 (astro)	

While the preceding section suggested few jobs are awaiting applicants with welding skill, at least the wage they will command may be relatively high.

BEST COPY AVAILABLE

A minimum wage was proposed by none of the companies anticipating to hire persons with welding skills, nor was a wage ranging between $5.30 and $8.00 per hour. All respondents professed at least $8.00 per hour as a starting wage, and almost two-thirds (17 of 26 respondents) claimed as much as $15 or more per hour. In fact, six companies who said they would be hiring claimed they would start a welding-trained employee at $25 per hour or more.

Welding and Electrical Firms to Pay the Most. The highest starting wage was consistently reported by the Welding companies: of the four who responded to this section of the questionnaire, three said that they would pay $25 or more per hour to their new hires, while the fourth company promised $15-25 per hour.

Another source of high wage is the electrical field. Here, three of the seven respondents promised $25+ per hour, and another three related $15 per hour.

Variable Wage Offered. Individual businesses within each category tended to show varying wages for hiring welding-skilled employees, perhaps reflecting the diverseness of companies that serve the small population base on Maui, or possibly a less than static economic situation. The response rate to this item is also relatively low, which could account for some of the apparent variability.

C. Demand for In-Service Training

Another reason for welding training at the college, in addition to the primary goal of training skilled workers for the welding industry on Maui, is to provide in-service training and skills upgrading for those employees already working in the field.

The survey assessed the employment demand for welding in-service training with Question #1: Estimate the number of employees in your firm (including yourself) who could benefit from courses in specific areas of Welding. Results to this item are summarized by Table Q-1.

The demand for in-service in welding is quite large, in contrast to the relatively small demand described in the previous section for hiring new welders. Respondents claimed enough employees would benefit from taking welding courses to fill 701 seats.

In-Service Courses in High Demand. The subject area with the strongest demand from respondents is Hand/Power Tools. Respondents indicated a collective total of 167 employees who would benefit from training in this area.

Four other subjects showed a strong demand: Oxyfuel welding (115), Arc Welding (104), Safety (98), and MIG (89).

Other areas received interest as well: TIG (63), and Structural Steel (60).

Companies Generating In-Service Demand. The largest demand for in-service came from the 10 hotels who completed the survey, suggesting enough employees would benefit from training to fill 187 seats.

The next highest demand was 114 seats from the mechanics field (this including several government maintenance yards). Welding and welding-related firms generated another 84 and 78 seats, respectively. The lowest demand came from plumbing (1).

Table Q-1
Number Employees Might Benefit from Welding Courses

Subject	Weld	Misc.	ABRP	Truck	AG	Elect	Plumb	Mech	Hotel	Spec	Total*
Tools	17	12	7	4	2	9		50	62	4	167
Oxyfuel	11	14	7	9	6	14	1	13	32	8	115
Arc	15	13	7	9	6	11		12	24	7	104
MIG	13	13	7	11	5	7		9	17	7	89
TIG	11	1	7	11	3	7		9	11	3	63
Steel	12	12	7	2	1	6		4	10	6	60
Safety	5	13	7	12	4	8		14	31	4	98
Other						2**		3***			5
Overall	**84**	**78**	**49**	**58**	**27**	**64**	**1**	**114**	**187**	**39**	**701**

*Note.—Whenever a respondent x'd an item instead of indicating the "number" of employees who would benefit from a class, this analysis added "1" for the "x" in computing the total, even though the intended number of employees might be much higher. As such the actual totals may be higher than reflected.
**Note.—Other subject areas suggested were: (1) Electrical training and/or soldering; and (1) Courses on electrical and mechanical skills.
*** Note.—Other subject areas suggested were: (2) cast iron welding; and (1) use of responders and scott air packs for conference space welding; underwater welding; fire control; first aid pertaining to burns and smoke inhalation.

D. Recent Employee In-Service

Those surveyed were asked to indicate whether they or their employees had received Welding-related training within the past year by Question #3, results of which are described in Table Q-3.

Table Q-3
Firms with Employees Receiving Welding Training

Sector	No. Hr. per Emp.	No. Emp.	Where	Who
Welding Firm	20	1	MCC	Plumbing Instr
Waste Management	60	2	Here	Safety/Welder
Fencing/gate	2	15	On site	Gaspro
Ag-UH	30+	1	MCC	Mark Morimoto
Muffler/Mechanics/Boat Repair			MCC	Mark Morimoto
Government		20	HonCC	B. Alejado
Utility		1	MCC	Mark Morimoto

A very interesting disparity emerges by comparing responses to Items #1 and #3. While many companies expressed in Item #1 the need for employees to have courses in a variety of Welding areas, in Item #3 very few firms reported having employees who actually received training in the past year. Replying in the affirmative were just seven (7) firms. Much of that training was provided by MCC.

E. Best Time for In-Service Classes

The survey assessed the potentially best time for offering in-service classes with Question #4: When would you or your employees most likely take advantage of Welding courses? (Check all that apply.) The results are tabulated below in Table Q-4.

Table Q-4
Best Times for In-Service Classes

No. companies selecting Mornings	6
No. companies selecting Afternoons	3
No. companies selecting Evenings	34
No. companies selecting Weekends	23

Evening Classes. Respondent preference is quite clear-cut. Most expressed interest for in-service classes scheduled in the evenings, with 34 companies responding favorably for this.

Weekend Classes. The weekend should not be ignored, with 23 companies opting for this (although most of them selected the evening option, too).

Morning Classes. The companies which said their employees were likely to take advantage of Welding courses in the day numbered only six.

Afternoon Classes. Afternoon classes received the least support, with only three (3) companies selecting this option (and most chose other times as well).

Clearly any Welding instruction at Maui Community College intended for in-service should take place in the evenings or on weekends.

F. Differential Wage Paid For Welding Skill or Formal Training

Question #6a assessed whether companies were paying a differential wage to employees with welding skill or with formal welding training; and if so, then how much is the differential. Table Q-6a-1 summarizes the responses regarding welding skill, and Table Q-6a-2 summarizes those for welding training.

Thirteen (13) companies stated that they would pay a differential wage for welding skill. Another 20 said they would not. Twenty-one (21) companies left the item blank because to them the item may not have been applicable, or because they were not willing to reveal their intention. (Note: As before, no importance can be placed on the large number leaving the item blank because of the strategy of trying to include every possible business on Maui that might need welding training for employees, thus enhancing the opportunity to include "not applicable" in the sample.)

As for formal welding training, there were nine (9) respondents who said they would pay a differential wage. Another 15 said they would not. And 30 respondents left the item blank.

Welding Companies. All responding welding companies indicated that they pay a differential wage to employees with welding skill. Although, the stated differential varies considerably among welding firms, from $5 to 25 per hour. As for formal training, both respondents said they would pay a full $20-25 per hour more, citing journeyman wages.

Other Companies Giving Wage Differential. Welding skill would lead to a better wage in other types of businesses: ABRP (1); Trucking (3); Electrical (2); Mechanics (1); Miscellaneous (1): fencing; Special (1): utility. As for welding training, a few non-welding firms responded positively to this. Most respondents left the item blank.

As for the differential amount, the response rate was so low as to disregard the data: two said they would pay a nominal amount ($1-1.20 per hour) more for welding skill, and one promised $5.00 more per hour regarding formal training.

Not Giving Differential Wage. Areas where none said they would pay a differential wage for welding skill were: Plumbing, Mechanics, Hotels, and Agriculture. One hotel did say for formal welding training it would pay a differential wage, but no agriculture, plumbing, or mechanics company would, nor any in autobody and electrical.

Table Q-6a-1
Differential Wage Paid for Welding Skill

Sector	Yes	No	Blank/NA	Per Hour More
Welding	4	–	1	$5, 25, 6, Apprentice $12
Misc. Weld	1	–	2	$1
ABRP	1	1	–	
Trucking	3	–	2	
Electrical	2	6	6	$1.20
Plumbing	–	–	2	
Mechanics	1	3	1	
Hotels	–	7	3	
Ag	–	2	2	
Special	1	1	2	
Total	**13**	**20**	**21**	

Table Q-6a-2
Differential Wage Paid for Welding Training

Sector	Yes	No	Blank	Per Hour More
Welding	2	–	3	$25, $20+ journeyman
Misc. Weld	1	–	2	$5
ABRP	1	–	1	Will consider
Trucking	2	–	3	
Electrical	–	5	9	
Plumbing	–	–	2	
Mechanics	1	3	1	
Hotels	1	5	4	Depends
Ag	–	1	3	
Special	1	1	2	
Total	**9**	**15**	**30**	

G. Preference Given for Welding Skill in Hiring, Promoting, or Retaining Employees

Whether companies were willing to give preference to welding skill in hiring, promoting, or retaining employees was assessed in Question #6b, and reported in Table Q-6b below.

About the same number of companies (20) said that such preference would be given as the number (21) that out-and-out said no preference would be given in personnel decisions regarding employees with welding skill. Such preference was found in all sectors, with the sole exception of plumbing.

The response varied considerably across sectors, although there was consensus in the welding, miscellaneous, ABRP, and special categories to give preference in personnel decisions to those with welding skill.

Table Q-6b
Preference Given in Hiring, Promoting, or Retaining Employees

Sector	Yes	No	Blank	Specify
Welding	4	–	1	*
Misc. Weld	3	–	–	**
ABRP	2	–	–	
Trucking	1	1	3	
Electrical	2	8	4	***
Plumbing	–	1	1	
Mechanics	1	4	–	
Hotels	4	4	2	****
Ag	1	3	–	
Special	2	–	2	
Total	**20**	**21**	**13**	

* Y: Journeyman 5 yr. minimum; Y: Union shop $25 + fringe.
** B: Possibly for salesperson.
*** Y: It is always good to have extra skills; N: Not at this time; N: Not required.
**** Y: Depending if position that needs filling does any welding; Y: Will generally be a more accomplished maintenance engineer.

Welding Companies. The pattern is clear for welding companies, where four respondents stated that preference is given in personnel decisions for welding skill.

In three other sectors, preference in personnel decisions for employees with welding skill was indicated by all respondents (albeit low in number): miscellaneous, autobody, and special categories.

H. Commentary

Question #7 queried participants on what prospective new occupations in Welding are emerging on Maui. A wide array of suggestions were offered with no clear pattern

emerging. The reader is encouraged to read the verbatim comments recorded in the next section: Responder Comments.

Question #8 was an open-ended item asking for "other comments." These too did not reveal a clear pattern and are recorded in the Responder Comment section for reader perusal.

SYNOPSIS

A community needs assessment to ascertain the employment need on Maui for persons with Welding skill was distributed to 282 businesses, including firms in welding, trucking, farming, electrical, mechanics, plumbing, hotels, and autobody, and union representatives. Results based on 54 respondents gave evidence that the projected need for hiring new welding-skilled employees is about 8.8 per year over the next five years (totaling 44 hires). An equal number was projected for expansion (22) and replacement (22). A conclusion of this finding was that the anticipated employment demand on Maui for welding-skilled employees (8.8 per year) was small in comparison to the MCC Welding program capacity for training 15 welders per year.

The firms expecting to hire numbered 17 and they spread across several business categories, from welding per se to welding-related, autobody, trucking, electrical, mechanics, and hotels. This result suggested that any Welding instruction at MCC would need to serve as a support course for a broad range of trades, and not focus on the employment needs of just the welding companies.

The starting wage for welding-skilled hires was considerably above the minimum wage, with all respondents regardless of sector professing at least $8 per hour, and two-thirds promising $15 or more per hour. Saying they would pay a differential wage for welding skill were 13 companies and for welding training were nine (9) companies. Even more (20) companies expressed giving preference in the personnel decisions of hiring, promoting, or retaining to employees with welding skill.

The in-service demand was quite high, although the reported track record was rather low. Many respondents claimed employees would benefit from welding-related training, enough to fill more than 700 seats. But just seven (7) firms said their employees had taken in-service in the past year. The expressed need for welding training cut across many sectors, with hotels generating the largest single need. The subject area with the greatest interest was hand and power tools, although interest was evident in all other areas. The best times for classes were evenings and weekends.

These results suggest a consideration for restructuring of the Welding program at the college to focus less on the needs of Welding firms per se, and addressing a moderate need for pre-service and in-service training in welding as a support skill across a broad spectrum of the vocational sector.

RESPONDER COMMENTS

NEEDS ASSESSMENT FOR
EDUCATION AND TRAINING IN WELDING ON MAUI
Maui Community College
Fall 1996

RESPONDER COMMENTS

7. **In your opinion what prospective new areas/occupations in Welding are emerging on Maui?**

I think the entrepreneur is going to expand.
MIG & TIG.
Equipment & pipe welding, stainless steel, industrial welding.
Heli-Arc.
Owner operators with c-license + welding truck (me). Operator Engineers Union. Mech. Welder combo. Apprentice Program. Ornamental iron fence & gates. Pearl Harbor Shipyard, any Shipyard in USA.
Sales - Possiblity for salesperson.
Art work (Metal Sculptors), More metal Buildings, Security in expensive homes or businesses.
Constuction - Industry.
More maintenance type of job, which do not need certification.
Due to the increased high-technology emphasis and possibilities of high teach opportunities on Maui, you might consider some limited exploration/training in "electron-beam" welding, for ultra-precise applications, i.e. vacuum systems, space-flight-equipment, micro-electronics, and specialized optics and detectors!!!
Building steel houses & the building maintenance field. Many people could benefit from welding courses, but with all the union busting going on, there isn't any pay involved. The county's attitude seems to be we can force you to do the work & not pay you for it, if you want training do it yourself on your own time; and you pay for your own schooling. Upon being certified you won't get any more pay, but if something you weld should break, they will say you were certified. You become the scapegoat.
We hire outside welders when work is needed.
Welding to me is heavy commercial enterprise. How much welding did you do around the house last year, 10 yrs, 30 yrs (maybe once or twice, maybe). If state would start doing overpasses for traffic, there would probably be some welding jobs, I just don't know.
As you know, most businesses are slow nowadays. We are lucky - we are busy all the time. We employ silver solder as our main use of welding technology.
If this is strictly for Maui, then I cannot fill this out. Our Young Brothers Maintenance Dept. is located in Honolulu. We have the capability to repair, fabricate, welding of any sort to maintain our

fleet of tugs and barges serving Hawaii statewide. Suggest you contact Denver Webb, Maintenance Superintendent, phone 543-9333 for more information.

Not sure.
Not familiar.
I'm not familiar with the welding industry.
I'm not familiar with the welding field.
I'm not aware of what Maui has to offer.
None that I know of.

8. Other comments?

Have classes or courses as needed or wanted by business or community.
Please provide us (teachers and students) with an opportunity to continue our education. We need weekend and evening courses to maintain "brush-up" as well as learn new techniques. Safety programs & certifications.
Need more courses in Blueprints, Structural, Welding.
Students should learn to pass plate test 1/2"- Pipe test 6" sch. #40. Students should learn thick material welding 1"steel-3" steel with 7018 electrodes, Procedors & Theory.
Welding is extremely important to us, but it must be part of a complete package of skills & talents. Nevertheless, we applaud your effort to teach people this valuable skill.
Although welding is a important trade for industry, there is a limited use in the hotel engineering field. It is utilized, but not to the extent of other business/industry.
Glad to see you are considering expanding your role in this area.
The training one of our technicians he received from your MCC Welding class has saved us thousands of dollars in repair costs.
Have a survey for electrical skill training courses.
We don't do any welding on this property, if and when it's needed we hire an outside vendor to do it. Thank you for your survey.
I often retain the services of metal fabrications in the area.
Not a required skill in our trade. When needed we hire sub contractors.
We don't weld often, usually hire.
Will be downsizing & closing.
None.
Welding is not required at our establishment.
We are a provider of welding equipment. Not all questions apply. We approached this from a inside/outside training for our sales staff.
As we are an office & office staff only it is difficult to answer many of these questions.
We are an independent 1-man electrical contractor firm, sorry for lack of information.
Our company does residential & commercial plumbing, however, not much welding.
This operation have only maintenance workers, helpers, and labors.

APPENDIX A
Developers of the Welding Needs Assessment

Welding Advisory Committee:

Mike Lum
Hawaiian Commercial & Surgar Co., Ltd.

Emmons Connell
GASPRO

Harvey Makii
Maui Electric Co., Ltd.

Randy Montalvo
Lahainaluna High School

Welding Program Coordinator: Mark Morimoto

Division Chair for Vocational Technical: Dennis Tanga

Assistant Dean of Instruction: Jean A. Pezzoli, Ph.D.

Dean of Instruction: Liz d'Argy

APPENDIX B

Maui Community College
UNIVERSITY OF HAWAI'I
Office of the Dean of Instruction

September 1996

Dear Friend:

Would you help us by filling out the attached survey? Maui Community College is exploring future directions for its Welding Technology program. We are looking at two areas: the skills and knowledge needed by students now and into the future; and the number of jobs that are and will be available for those that are trained.

The welding field has undergone many changes since Welding Technology became part of the MCC curriculum in the 1960's. The College currently has a range of courses in oxyfuel, arc, MIG, TIG, and structural steel welding, all of which lead to a Certificate of Achievement in Welding Technology.

We need to continually seek advice on how to re-structure the curriculum to remain abreast with what is happening in business and industry. Normally we get this advice one to two times a year from our smaller industry advisory committees. It is again time, however, to seek information from a larger group. First we are asking you to fill out a survey. When the survey results have been compiled, we will invite you to a meeting to share and discuss the results.

Would you complete the attached survey and include any comments and return it to us within the next 5 days. We are enclosing a pre-addressed, stamped envelope.

Your assistance is greatly appreciated.

Sincerely,

Elizabeth d'Argy
Dean of Instruction

Enclosure

310 Kaahumanu Avenue • Kahului, Maui, Hawai'i 96732
Phone (808) 242-1234, 242-1290 • Fax (808) 244-0882
An Equal Opportunity Employer

APPENDIX C

Maui Community College

SURVEY ON MAUI COUNTY NEEDS FOR EDUCATION AND TRAINING IN WELDING

1. Estimate the number of employees in your firm (including yourself) who could benefit from courses in these areas of Welding:

___ Hand and Power Tools
___ Oxyfuel Welding, Cutting, and Brazing
___ Arc Welding (SMAW, also referred as "stick" welding)
___ MIG Welding (GMAW, also referred to "wire feed" welding)
___ TIG Welding (GTAW, also referred to "heli-arc" welding)
___ Structural Steel and Metallurgy
___ Safe handling of Welding Equipment
___ Other:_____

2a. In what type of business are you involved?

___ Welding Firm
___ Welding Equipment
___ Hotel
___ Agriculture
___ Metal Febricator
___ Trucking
___ Scrap Metal
___ Auto Body Repair
___ Electrical
___ Mechanics
___ Golf Course
___ Fencing/Gates
___ Union
___ Government
___ Boat Repair
___ Sheet Metal
___ Muffler Repair
___ Other: specify _____

2b. What is the size of your company: ___ number of employees

3. If you or your employees received Welding-related training within the past year, specify the area(s):

How many hours of training were received? ___ No. hours per employee ___ No. employees

Where was training held? _____

Who was the instructor/sponsor? _____

4. When would you or your employees most likely take advantage of Welding courses? (Check all that apply.)

___ mornings ___ afternoons ___ evenings ___weekends

5. In the next five years, how many staff with Welding skills do you expect to hire (give number):

___ due to expansion ___ due to replacement

At what hourly rate of pay?

___ min. wage ($5.25) ___ $5.30-8 ___ $8-15 ___ $15-25 ___$25 +

6a. Do you pay a differential wage to employees:

with Welding skill? ___ yes ___ no per hr more:$____

with formal Welding training? ___ yes ___ no per hour more:$____

6b. Do you give preference in hiring, promoting or retaining to employees with Welding skill?

___ yes ___ no ___ specify:_____

7. In your opinion what prospective new areas/occupations in Welding are emerging on Maui?

8. Other comments:

Thank You!

Please return the survey in the envelope provided, or mail to: Assistant Dean of Instruction, Maui Community College, 310 Kaahumanu Avenue, Kahului, HI 96732 Fax: 244-0882 Phone: 984-3290

APPENDIX D
Mailing List

The sample was generated by extracting relevant companies from the yellow pages of the latest Maui phone directory. Labels were made for all companies listed under these categories.

Welding
Welding Equipment-Renting
Welding Equipment-Repair
Ornamental Metal Work
Scrap Metals
Metal Products
Steel Fabricators
Boat Repair
Boat Charter (selected)
Boilers-Repair & Cleaning
Gate Operating Devices
Fence Contractors
Automobile Body Repair & Paint
Radiators - Automotive
Mufflers & Exhaust Systems-Engine
Trucking
Rubbish Removal
Plumbing Contractors
Electric Contractors
Electric Companies
Air Conditioning Equipment & Systems
Hotels (major)
Farms
Sugar Brokers & Wholesalers
County of Maui - Maintenance Division
Department of Transportation - State - Airports Division
Department of Transportation - State - Harbors Division
Department of Transportation - State - Highways Division
University of Hawaii - Institute of Astronomy
University of Hawaii - Kula Experiment Station
Army Reserve
National Park Service - Haleakala National Park
Department of Transportation – Federal Aviation Administration
Matson Navigation/Young Brothers

This list was augmented with a representative of several relevant unions:

Carpenters Union
Ironworkers
Plumber
Sheetmetal
Refrigeration

APPENDIX E
Respondents by Business Sector*

Sector	Firms
Welding	5
Misc. Weld **	3
Trucking	5
Ag	4
Electrical	14
Hotel	10
ABRP	2
Plumbing	2
Mechanics	5
Special ***	4
Total	**54**

*Note.—Sector was defined by responses to Item 2a: What type of business are you involved in?

**Note.—Miscellaneous Welding included: (1) Construction; (1) Fencing/Gate; (1) Sale of Welding/Safety Products.

***Note.—Special included: (1) Tug/Barge Service; (1) Electrical Utility; (1) Institute for Astronomy; (1) Blank.